WHAT IS CLAIMED IS:

1.   A tape mirror interface comprising:

an input terminal coupled to at least one input node and capable of receiving data
        transfer requests;

a plurality of output terminals coupled to a plurality of tape storage devices; and

a control element coupled to the input terminal and plurality of output terminals,
        the control element presenting the plurality of tape storage devices as
        separate media devices and selectively controlling data transfer in a
        synchronous mode so that writes to a target tape storage media are
        mirrored to a mirrored tape storage media, and in a split mode so that
        writes are written to the tape storage devices independently.

2.   The tape mirror interface according to Claim 1 wherein:

the control element responds to a SYNC command by synchronously writing data
        to a primary tape storage device and to a secondary tape storage device
        with data discrepancies between the primary tape storage device and the
        secondary tape storage device being preserved.

3.   The tape mirror interface according to Claim 1 wherein:

the control element responds to a SPLIT command by enabling writing to a
        primary tape storage device and to a secondary tape storage device
        separately.

4.   The tape mirror interface according to Claim 1 wherein:

the control element is implemented in a software Application Programming
        Interface (API) executable on an external host computer.

5.   The tape mirror interface according to Claim 1 wherein:

the control element is implemented in a hardware Small Computer Systems
        Interface (SCSI) Logical Unit (LUN) enabling mirror configuration
        commands to be transferred as SCSI commands.

6. The tape mirror interface according to Claim 1 wherein:

the control element is implemented in a hardware out-of-band management
interface.

7. The tape mirror interface according to Claim 1 wherein:

the control element is implemented in a hardware Local Area Network (LAN)
based control interface using a Transmission Control Protocol/Internet
Protocol (TCP/IP) management protocol.

8. A tape library capable of storing data received from at least one external
host, the tape library comprising:

a plurality of tape drives;

a bridge coupled to the plurality of tape drives and capable of transferring data
between the at least one external host and the plurality of tapes drives; and

a mirror interface coupled to the bridge, the mirror interface having a selective
capability to mirror write operations directed to a first tape drive to a
second tape drive of the plurality of tape drives and to complete the write
operations only when both the first tape drive and the second tape drive
return successful write status signals, otherwise setting an error status, the
mirror interface presenting the plurality of tape drives to the at least one
external host as separate devices.

9. The library according to Claim 8 wherein:

the bridge is an interface selected from among a group of interfaces comprising:

an interface between external Fibre Channel (FC) hosts and internal Small
Computer Systems Interface (SCSI) devices;

an interface between external FC devices and internal FC devices;

an interface between external internet SCSI (iSCSI) devices and internal
SCSI devices;

an interface between external internet SCSI (iSCSI) devices and internal
FC devices; and

an interface between external iSCSI devices and internal iSCSI devices..

10. The library according to Claim 8 wherein:

the mirror interface intercepts a media command from the at least one external
host directed to the second tape drive while the second tape drive is
receiving mirrored data and returns a busy signal to the at least one
external host that sends the media command.

11. The library according to Claim 8 wherein:

the mirror interface presents the first tape drive and the second tape drive as
separate Logical Units (LUNs) and presents a control LUN to the at least
one external host to enable command communication from the at least one
external host to the bridge.

12. A command interface controller for usage in a tape storage array
comprising:

a command interpreter capable of identifying at least one interface command; and

a control element responsive to the identified at least one interface command and
selectively controlling data transfer in a synchronous mode so that writes
to a target tape storage media are mirrored to a mirrored tape storage
media, and in a split mode so that writes are written to individual tape
storage media independently.

13. The command interface according to Claim 12 wherein:

the control element presents a plurality of tape storage devices and corresponding
media in the tape storage array to an external device that issues commands
as separate and individual tape storage devices and media.

14. The command interface according to Claim 12 wherein:

the command interpreter identifies a MODE command; and

the control element responds to the MODE command by designating whether the
command interface controller supports tape mirror functionality and
whether tape mirror functionality is enabled or disabled.

15.   The command interface according to Claim 12 wherein:

the command interpreter identifies a SYNC command; and

the control element responds to the SYNC command by enabling mirror

functionality and synchronously writing data to a primary tape storage

device and to a secondary tape storage device with data discrepancies

between the primary tape storage device and the secondary tape storage

device being preserved.

16.   The command interface according to Claim 12 wherein:

the command interpreter identifies a SYNC command; and

the control element responds to the SYNC command by determining whether less

than two tape storage devices are coupled to the command interface and, if

so, returning an error message.

17.   The command interface according to Claim 12 wherein:

the command interpreter identifies a SPLIT command; and

the control element responds to the SPLIT command by disabling mirror

functionality and writing to a primary tape storage device and to a

secondary tape storage device separately.

18.   A data protection system for a storage network including a plurality of tape

storage devices, the data protection system comprising:

a communication process capable of communicating with a mirror interface

having a selective capability to mirror write operations directed to a first

tape storage device to a second tape storage device of the plurality of tape

storage devices;

an identification process that identifies the plurality of tape storage devices as

separate and distinguishable devices; and

a management process capable of communicating with the plurality of tape

storage devices via the communication process and utilizing the

identification process to distinguish the tape storage devices, the

management process being capable of managing media for the individual

tape storage devices separately.

19.   The data protection system according to Claim 18 further comprising:

a functionality detection process utilizing the communication process to

communicate with the mirror interface and determine whether the mirror

interface supports tape mirror functionality.

20.   The data protection system according to Claim 18 further comprising:

a copy process utilizing the communication process to write data to a first tape

storage device and simultaneously mirror the write data to a second tape

storage device.

21.   The data protection system according to Claim 18 further comprising:

a mirror function enable process utilizing the communication process to enable

mirror functionality of the mirror interface for writing data to a first tape

storage device and simultaneously mirroring the written data to a second

tape storage device.

22.   The data protection system according to Claim 18 further comprising:

a physical configuration detection process that identifies the tape storage devices

coupled to the mirror interface and identifies a primary device and a

secondary device.

23.   The data protection system according to Claim 18 further comprising:

a media load process that loads media into a plurality of tape storage devices using

separate control commands for the individual tape storage devices.

24.   The data protection system according to Claim 18 further comprising:

a media load process that loads media into a plurality of tape storage devices using

separate control commands for the individual tape storage devices, detects

whether a media element is defective, and, if so, loads another media

element in place of the defective element.

25.   The data protection system according to Claim 18 further comprising:
a media format process that formats media elements in a plurality of tape storage
        devices using separate control commands for the individual tape storage
        devices.

26.   The data protection system according to Claim 18 further comprising:
a backup process that:
        directs a control Logical Unit (LUN) associated with the mirror interface
                to enable a tape mirror mode of operation;
        writes backup data to a primary media in a primary tape storage device, the
                mirror interface mirroring the write operations to a secondary
                media in a secondary tape storage device; and
        upon completion of a backup write phase, directs the control LUN to
                disable the mirror mode of operation.

27.   The data protection system according to Claim 26 further comprising:
a backup process that:
        upon completion of a backup write phase, closes backup operations.

28.   The data protection system according to Claim 26 further comprising:
a backup process that:
        accepts control signals from the plurality of tape storage devices via the
                mirror interface; and
        responds to a write failure of the media in the secondary tape storage
                device by:
                disabling the mirror mode of operation;
                continuing the backup operations; and
                writing an error code that indicates completion of only one backup
                        tape copy.

29.   The data protection system according to Claim 26 further comprising:
a backup process that:

accepts control signals from the plurality of tape storage devices via the
mirror interface; and

responds to a write failure of the media in the primary tape storage device
by:

disabling the mirror mode of operation;

transferring media from the secondary tape storage device to the
primary tape storage device;

continuing the backup operations; and

writing an error code that indicates completion of only one backup
tape copy.

30.   The data protection system according to Claim 26 further comprising:
a backup process that:

accepts control signals from the plurality of tape storage devices via the
mirror interface; and

responds to a write failure of the media in either the primary or secondary
tape storage device by:

replacing the media subject to the write failure;

disabling the mirror mode of operation;

rewinding media in the primary and secondary tape storage
devices; and

restarting the backup operations.

31.   The data protection system according to Claim 26 further comprising:
a backup process that:

during backup operations to the primary tape storage device with the tape
mirror mode of operation enabled, protects against simultaneous
backup operations directed to the secondary tape storage device.

32.   The data protection system according to Claim 26 further comprising:
a backup process that:

> during backup operations to the primary tape storage device with the tape
> > mirror mode of operation enabled, marks the secondary tape
> > storage device as offline.

33.   The data protection system according to Claim 26 further comprising:
a backup process that:

> during backup operations to the primary tape storage device with the tape
> > mirror mode of operation enabled, protects against simultaneous
> > backup operations directed to the secondary tape storage device;
> > and
>
> upon completion of the backup operations to the primary tape storage
> > device, allows backup operations directed to the secondary tape
> > storage device.

34.   The data protection system according to Claim 26 further comprising:
a backup process that:

> upon completion of the backup operations, unloads the two copies of the
> > backup media to selected media pools.

35.   An article of manufacture comprising:
a controller usable medium having a computable readable program code embodied
therein for executing in a data protection system for a storage network
including a plurality of tape storage devices, the computable readable
program code further comprising:

> a code capable of causing the controller to communicate with a mirror
> > interface having a selective capability to mirror write operations
> > directed to a first tape storage device to a second tape storage
> > device of the plurality of tape storage devices;
>
> a code capable of causing the controller to identify the plurality of tape
> > storage devices as separate and distinguishable devices; and

a code capable of causing the controller to communicate with individual
tape storage devices of the plurality of tape storage devices
separately via the communication process and utilizing the tape
storage device identification process to distinguish the tape storage
devices.

36. The article of manufacture according to Claim 35 wherein the computable
readable program code further comprises:

a code capable of writing data to a first tape storage device and concurrently
mirroring the write data to a second tape storage device.

37. The article of manufacture according to Claim 35 wherein the computable
readable program code further comprises:

a backup code comprising:

a computable readable program code capable of causing the controller to
direct a control Logical Unit (LUN) associated with the mirror
interface to enable a tape mirror mode of operation;

a computable readable program code capable of causing the controller to
write backup data to a primary media in a primary tape storage
device, the mirror interface mirroring the write operations to a
secondary media in a secondary tape storage device; and

a computable readable program code that, upon completion of a backup
write phase, causes the controller to direct the control LUN to
disable the mirror mode of operation.

38. The article of manufacture according to Claim 37 wherein the computable
readable program code further comprises:

a backup code comprising:

a computable readable program code that, during backup operations to the
primary tape storage device with the tape mirror mode of operation
enabled, protects against simultaneous backup operations directed
to the secondary tape storage device.

39.   The article of manufacture according to Claim 37 wherein the computable readable program code further comprises:

a backup code comprising:

a computable readable program code that, during backup operations to the primary tape storage device with the tape mirror mode of operation enabled, protects against simultaneous backup operations directed to the secondary tape storage device; and

a computable readable program code that, upon completion of the backup operations to the primary tape storage device, allows backup operations directed to the secondary tape storage device.

40.   An article of manufacture comprising:

a controller usable medium having a computable readable program code embodied therein for executing in a command interface controller for usage in a tape storage array, the computable readable program code further comprising:

a computable readable program code capable of causing the controller to identify at least one interface command; and

a computable readable program code capable of causing the controller to respond to the identified at least one interface command and selectively control data transfer in a synchronous mode so that writes to a target tape storage media are mirrored to a mirrored tape storage media, and in a split mode so that writes are written to elements of the tape storage array independently.

41.   The article of manufacture according to Claim 40 wherein the computable readable program code further comprises:

a computable readable program code capable of causing the controller to identify a MODE command; and

a computable readable program code capable of causing the controller to respond to the MODE command by designating whether the command interface supports tape mirror functionality and whether tape mirror functionality is enabled or disabled.

42.   The article of manufacture according to Claim 40 wherein the computable readable program code further comprises:

a computable readable program code capable of causing the controller to identify a SYNC command; and

a computable readable program code capable of causing the controller to respond to the SYNC command by enabling mirror functionality and synchronously writing data to a primary tape storage device and to a secondary tape storage device with data discrepancies between the primary tape storage device and the secondary tape storage device being preserved.

43.   The article of manufacture according to Claim 40 wherein the computable readable program code further comprises:

a computable readable program code capable of causing the controller to identify a SYNC command; and

a computable readable program code capable of causing the controller to respond to the SYNC command by determining whether less than two tape storage devices are coupled to the command interface and, if so, returning an error message.

44.   The article of manufacture according to Claim 40 wherein the computable readable program code further comprises:

a computable readable program code capable of causing the controller to identify a SPLIT command; and

a computable readable program code capable of causing the controller to respond to the SPLIT command by disabling mirror functionality and writing to a primary tape storage device and to a secondary tape storage device separately.

45.   A data protection system capable of storing data on a plurality of tape drives comprising:

an interface capable of transferring data from at least one data source to the plurality of tape drives;

a data mover coupled to the interface and capable of moving data from source to destination, bypassing intermediate system elements; and

a tape mirror coupled to the interface and coupled to the data mover, the tape mirror presenting the plurality of tape drives as separate media devices, receiving data from the data mover, and selectively transferring the data in a synchronous mode so that writes to a target tape media are mirrored to a mirrored tape media, and in a split mode so that writes are written to tape drives independently.

46. The data protection system according to Claim 45 further comprising:

a buffer coupled to the data mover and coupled to the tape mirror, the buffer capable of receiving data from the data mover and the mirror and splitting the data into multiple write streams for transfer to a plurality of tape drives.

47. The data protection system according to Claim 45 wherein:

the interface is a Fibre-Channel to SCSI bridge; and

the data mover is an XCOPY SCSI command.

48.   The data protection system according to Claim 45 wherein:

the interface is a bridge selected from among a group of bridges comprising:

a bridge between external Fibre Channel (FC) hosts and internal Small Computer Systems Interface (SCSI) devices;

a bridge between external FC devices and internal FC devices;

a bridge between external internet SCSI (iSCSI) devices and internal SCSI devices;

a bridge between external internet SCSI (iSCSI) devices and internal FC devices; and

a bridge between external iSCSI devices and internal iSCSI devices..

49. The data protection system according to Claim 45 further comprising:

a buffer coupled to the interface, the data mover, and the tape mirror; and

a control process capable of executing, in at least one control element buffer, a plurality of actions comprising:

controlling the interface to read data from a data source into the buffer
using data mover functionality;

controlling the data mover to detect whether the tape mirror is enabled;

controlling the tape mirror, if enabled, to generate duplicate writes to at
least two tape drives attached to the interface from the buffer.

50.   A data protection system for usage in a tape storage array comprising:

means for identifying at least one interface command; and

means responsive to the identified at least one interface command for selectively
controlling data transfer in a synchronous mode so that writes to a target
tape storage media are mirrored to a mirrored tape storage media, and in a
split mode so that writes are written to tape storage media independently.